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[Continued on next page]

(54) Title: **MUCOSAL IMMUNIZATION TO PREVENT PRION INFECTION**

Human	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37			
Gorilla	M	A	N	L	G	O	C	W	M	L	V	F	V	A	T	W	S	D	L	O	L	C	K	K	R	P	K	P	Q	Q	Q	W	N	T	Q	G	S	R		
Chimpanzee	M	A	N	L	G	O	C	W	M	L	V	F	V	A	T	W	S	D	L	O	L	C	K	K	R	P	K	P	Q	Q	Q	W	N	T	Q	G	S	R		
Mouse	M	A	N	L	G	O	C	W	M	L	V	F	V	A	T	W	S	D	L	O	L	C	K	K	R	P	K	P	Q	Q	Q	W	N	T	Q	G	S	R		
Rat	M	A	N	L	G	O	C	W	M	L	V	F	V	A	T	W	S	D	L	O	L	C	K	K	R	P	K	P	Q	Q	Q	W	N	T	Q	G	S	R		
Syrian Hamster	M	A	N	L	G	O	C	W	M	L	V	F	V	A	T	W	S	D	L	O	L	C	K	K	R	P	K	P	Q	Q	Q	W	N	T	Q	G	S	R		
Mink	M	V	K	S	H	I	G	S	W	L	L	V	F	V	A	M	W	S	D	V	Q	L	C	K	K	R	P	K	P	Q	Q	Q	Q	W	N	T	Q	G	S	R
Sheep	M	V	K	S	H	I	G	S	W	L	L	V	F	V	A	M	W	S	D	V	Q	L	C	K	K	R	P	K	P	Q	Q	Q	Q	W	N	T	Q	G	S	R
Goat	M	V	K	S	H	I	G	S	W	L	L	V	F	V	A	M	W	S	D	V	Q	L	C	K	K	R	P	K	P	Q	Q	Q	Q	W	N	T	Q	G	S	R
Cow	M	V	K	S	H	I	G	S	W	L	L	V	F	V	A	M	W	S	D	V	Q	L	C	K	K	R	P	K	P	Q	Q	Q	Q	W	N	T	Q	G	S	R
Greater Kudu	M	V	K	S	H	I	G	S	W	L	L	V	F	V	A	M	W	S	D	V	Q	L	C	K	K	R	P	K	P	Q	Q	Q	Q	W	N	T	Q	G	S	R

Human	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77					
Gorilla	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	P	H	Q	Q	Q	Q	Q	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	P	H	Q		
Chimpanzee	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	P	H	Q	Q	Q	Q	Q	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	P	H	Q	
Mouse	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	T	W	Q	Q	P	H	Q	Q	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	P	H	Q
Rat	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	T	W	Q	Q	P	H	Q	Q	Q	Q	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	P	H	Q
Syrian Hamster	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	T	W	Q	Q	P	H	Q	Q	Q	Q	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	P	H	Q
Mink	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	T	W	Q	Q	P	H	Q	Q	Q	Q	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	P	H	Q
Sheep	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	T	W	Q	Q	P	H	Q	Q	Q	Q	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	P	H	Q
Goat	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P	H	Q	Q	Q	Q	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	P	H	Q
Cow	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P	H	Q	Q	Q	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	P	H	Q
Greater Kudu	Y	P	Q	Q	Q	Q	P	Q	Q	H	R	Y	P	P	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	P	H	Q	Q	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	P	H	Q

Human	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108														
Gorilla	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Chimpanzee	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mouse	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Rat	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Syrian Hamster	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Mink	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Sheep	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Goat	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Cow	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Greater Kudu	Q	Q	Q	W	Q	Q	P	H	Q	Q	Q	W	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

(57) Abstract: Vaccines against prion disease eliciting a humoral immune response when administered mucosally are described. The vaccines comprise a prion protein, a prion protein fragment, or a non-amyloidogenic prion protein homolog and an adjuvant suitable for inducing a humoral immune response after mucosal administration. Suitable adjuvants include cholera toxin subunit B, heat-labile enterotoxin and aluminum hydroxide. Alternatively, the vaccine comprises a vector encoding a prion protein, fragment, or homolog in an attenuated *Salmonella* host. The vaccines can be used to prevent or treat prion disease in humans and other mammals.



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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*